

WHAT IS CLAIMED IS:

1. A geotextile/polyurethane composite comprising:
one or more geotextiles substantially impregnated with a one-component
heterogeneous liquid polyurethane composition comprising,
5 i) an isocyanate groups containing solid dispersed in a liquid
isocyanate reactive compound,
or
ii) a solid isocyanate reactive compound dispersed in a liquid
isocyanate, isocyanate adduct, or isocyanate terminated
10 prepolymer,
optionally catalysts, viscosity adjusting additives, solvents,
surfactants, crosslinking agents, pigments, fillers, and other
additives.
- 15 2. A liner for irrigation canals and ditches comprising the
geotextile/polyurethane composite according to Claim 1.
3. The geotextile/polyurethane composite according to Claim 1
having an elongation of at least about 5 % and a tensile strength of at least
20 about 200 psi.
4. The geotextile/polyurethane composite according to Claim 1,
wherein the water absorption is less than about 10 % by weight.
- 25 5. The geotextile/polyurethane composite according to Claim 1,
wherein the one or more geotextiles includes at least one thicker, more
sponge-like geotextile.
6. The geotextile/polyurethane composite according to Claim 1,
30 wherein the one or more geotextiles are substantially impregnated with the
one-component heterogeneous liquid polyurethane composition such that

the amount of polymer present in the composite ranges from about 0.2 kg to about 20 kg of polymer per square meter of geotextile.

7. The geotextile/polyurethane composite according to Claim 1,
5 wherein the one or more geotextiles are impregnated with the one-component heterogeneous liquid polyurethane composition such that the amount of polymer present in the composite ranges from about 0.5 kg to about 5 kg of polymer per square meter of geotextile.

10 8. The geotextile/polyurethane composite according to Claim 1 having a thickness of from about 40 microns to about 500 microns.

9. A process of forming a geotextile/polyurethane composite comprising the steps of:
15 impregnating one or more geotextiles substantially with a one component heterogeneous liquid polyurethane composition comprising,
i) an isocyanate groups containing solid dispersed in a liquid isocyanate reactive compound,
or
20 ii) a solid isocyanate reactive compound dispersed in a liquid isocyanate, isocyanate adduct, or isocyanate terminated prepolymer,
optionally catalysts, viscosity adjusting additives, solvents, surfactants, crosslinking agents, pigments, fillers, and other
25 additives;
conforming the one or more heterogeneous liquid polyurethane impregnated geotextiles to a surface; and
applying heat or a solvent to the heterogeneous liquid polyurethane impregnated geotextile to form a geotextile reinforced
30 polyurethane/polyurea composite.

10. The process according to Claim 9, wherein the composite is a liner for irrigation canals and/or ditches.

11. The process according to Claim 9, wherein the composite
5 has an elongation of at least about 5 % and a tensile strength of at least about 200 psi.

12. The process according to Claim 9, wherein the one or more
10 geotextiles includes at least one thicker, more sponge-like geotextile.

13. The process according to Claim 9, wherein the one or more
geotextiles are impregnated with the one-component heterogeneous liquid
polyurethane composition such that the amount of polymer present in the
composite ranges from about 1 kg to about 20 kg of polymer per square
15 meter of geotextile.

14. The process according to Claim 9, wherein the one or more
geotextiles are impregnated with the one-component heterogeneous liquid
polyurethane composition that the amount of polymer present in the
20 composite ranges from about 2 kg to about 5 kg of polymer per square
meter of geotextile.

15. The process according to Claim 9, wherein the composite
has a thickness of from about 40 microns to about 500 microns.
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16. In a process of lining canals and ditches, the improvement
comprising including the composite according to Claim 1.

17. In a process of lining canals and ditches, the improvement
30 comprising including the composite made by the process according to
Claim 9.